

CPC**COOPERATIVE PATENT CLASSIFICATION****B21K**

MAKING FORGED OR PRESSED PRODUCTS, e.g. HORSE-SHOES, RIVETS, BOLTS, WHEELS (making particular articles by working sheet metal without essentially removing material [B21D](#) ; processing wire [B21F](#) ; making pins, needles or nails [B21G](#) ; making particular articles by rolling [B21H](#) ; forging machines, pressing machines, hammering machines, in general [B21J](#) ; making chain [B21L](#) ; plating [B23K](#))

NOTE

This subclass includes only forging, pressing, or hammering operations which are specially adapted for use in the manufacture of particular objects and which, so far as the invention is concerned, are not combined with any different metal-working operation unless the latter is a subsidiary operation performed in the same machine.

Guide heading:

**Making particular articles by forging, pressing, or hammering
Equipment therefor**

B21K 1/00

Making machine elements

B21K 1/02

. balls, rolls, or rollers, e.g. for bearings

B21K 1/025

.. { of bullets }

B21K 1/04

. ball-races { or sliding bearing races }

B21K 1/05

. cages for bearings

B21K 1/06

. axles or shafts

B21K 1/063

.. { hollow (hollow racks [B21K 1/768](#)) }

B21K 1/066

.. { splined }

B21K 1/08

.. crankshafts

B21K 1/10

.. of cylindrical form

B21K 1/12

.. of specially-shaped cross-section

B21K 1/14

. fittings

B21K 1/16

.. parts of pipe or hose couplings

B21K 1/18

. pistons or plungers

B21K 1/185

.. { with cooling channels }

B21K 1/20

. valve parts

B21K 1/205

.. { rocker arms }

B21K 1/22

.. poppet valves, e.g. for internal-combustion engines

B21K 1/24

.. valve bodies
valve seats

- B21K 1/26 . housings or supporting parts, e.g. axle housings, engine mountings
- B21K 1/28 . wheels
discs
- B21K 1/30 .. with gear-teeth
- B21K 1/305 ... { helical }
- B21K 1/32 .. discs, e.g. disc wheels
- B21K 1/34 .. wheels with spokes
- B21K 1/36 .. with blades
- B21K 1/38 .. rims
tyres
- B21K 1/40 .. hubs
- B21K 1/42 .. pulleys, e.g. cable pulleys
- B21K 1/44 . bolts, studs, or the like ([making screw-thread B21K 1/56](#); [making U-bolts B21K 1/74](#))
- B21K 1/46 .. with heads
- B21K 1/463 ... {with recessed heads }
- B21K 1/466 ... {Heading machines with an oscillating die block }
- B21K 1/48 ... Machines working with hammers, e.g. beating in a radial direction, for forming heads
- B21K 1/50 ... Trimming or shearing formed heads, e.g. working with dies
- B21K 1/52 .. double-ended, e.g. with heads on both ends ([forming heads B21K 1/46](#))
- B21K 1/54 .. with grooves or notches
- B21K 1/56 . screw-threaded elements
- B21K 1/58 . rivets
- B21K 1/60 .. hollow or semi-hollow rivets
- B21K 1/62 .. special rivets, e.g. with electrical contacts
- B21K 1/64 . nuts ([making screw-thread B21K 1/56](#))
- B21K 1/66 .. form strip bars
- B21K 1/68 .. from round or profiled bars
- B21K 1/70 .. of special shape, e.g. self-locking nuts, wing nuts
- B21K 1/701 ... {Weld nuts }
- B21K 1/702 ... {Clinch nuts }
- B21K 1/704 ... {Cap nuts }
- B21K 1/705 ... {Castellated nuts }
- B21K 1/707 ... {Self-locking nuts }
- B21K 1/708 ... {wing nuts }
- B21K 1/72 . hooks, e.g. crane hooks, railway track spikes ([making nails in general B21G](#))
- B21K 1/74 . forked members or members with two or more limbs, e.g. U-bolts, anchors

- B21K 1/76 . elements not mentioned in one of the preceding groups
- B21K 1/761 . . {rings }
- B21K 1/762 . . {Coupling members for conveying mechanical motion, e.g. universal joints }
- B21K 1/763 . . . { Inner elements of coupling members }
- B21K 1/765 . . . { Outer elements of coupling members }
- B21K 1/766 . . {Connecting rods }
- B21K 1/767 . . {Toothed racks }
- B21K 1/768 . . . { hollow }

B21K 3/00 **Making engine or like machine parts not covered by sub-groups of [B21K 1/00](#)
Making propellers or the like**

- B21K 3/02 . cylinder heads
- B21K 3/04 . blades, e.g. for turbines
Upsetting of blade roots

B21K 5/00 **Making tools or tool parts, e.g. pliers**

- B21K 5/02 . drilling-tools or other for making or working on holes
- B21K 5/04 . . twisting-tools, e.g. drills, reamers
- B21K 5/06 . . Dressing, e.g. sharpening rock drills
- B21K 5/08 . . drifting tools
- B21K 5/10 . . Forming drill-bit shanks
- B21K 5/12 . other cutting tools ([cutlery wares B21K 11/00](#))
- B21K 5/14 . hand hammers
- B21K 5/16 . tools for turning nuts
- B21K 5/18 . handles or parts therefor
- B21K 5/20 . Making working faces of dies, either recessed or outstanding

B21K 7/00 **Making railway appurtenances
Making vehicle parts**

- B21K 7/02 . parts for permanent way ([spikes B21K 1/72](#))
- B21K 7/04 . . switch tongues
- B21K 7/06 . . sleepers
- B21K 7/08 . . base plates for rails, e.g. chairs
- B21K 7/10 . . rails joints
- B21K 7/12 . parts for locomotives or vehicles, e.g. frames, underframes

B21K 7/14	. . brake rigging or brake parts
B21K 9/00	Reconditioning railroad accessories, e.g. rails
B21K 11/00	Making cutlery wares Making garden tools or the like
B21K 11/02	. knives
B21K 11/04	. spoons table forks
B21K 11/06	. scissors
B21K 11/08	. sickles scythes
B21K 11/10	. axes picks
B21K 11/12	. spades shovels
B21K 11/14	. rakes garden forks
B21K 13/00	Making locksmiths' goods, e.g. handles for cases
B21K 13/02	. hinges
B21K 15/00	Making blacksmiths' goods
B21K 15/02	. horseshoes appurtenances therefor
B21K 15/04	. . caulks
B21K 15/06	. metal attachments for footwear, e.g. wearresisting plates
B21K 17/00	Making sport articles, e.g. skates
B21K 19/00	Making articles for agricultural machinery
B21K 19/02	. plough blades ploughshares
B21K 21/00	Making hollow articles not covered by a single preceding sub-group (essentially from sheet-metal or uniform thin-walled tubes B21D , e.g. B21D 41/00, B21D 51/00)

- B21K 21/02** . Producing blanks in the shape of discs or cups as semifinished articles for making hollow articles, e.g. to be deep-drawn or extruded
- B21K 21/04** . Shaping thin-walled hollow articles, e.g. cartridges
- B21K 21/06** . Shaping thick-walled hollow articles, e.g. projectiles
- B21K 21/08** . Shaping hollow articles with different cross-section in longitudinal direction, e.g. nozzles, spark-plugs
- B21K 21/10** . . cone-shaped or bell-shaped articles, e.g. insulator caps
- B21K 21/12** . Shaping end portions of hollow articles
- B21K 21/14** . . closed or substantially-closed ends, e.g. cartridge bottoms
- B21K 21/16** . Remodelling hollow bodies with respect to the shape of the cross-section ([remodelling end portions only B21K 21/12](#))
- B21K 23/00** **Making other articles**
- B21K 23/02** . members of endless tracks, e.g. track guides, shoes ([making from sheet-metal B21D](#))
- B21K 23/04** . flanged articles ([B21K 1/28 takes precedence](#); flanging tubes [B21D](#))
- B21K 25/00** **Uniting components to form integral members, e.g. turbine wheels and shafts, caulks with inserts, with or without shaping of the components** ([uniting by interference- or press-fitting B23P 11/02, B21K 19/02](#))
- B21K 25/005** . { [by friction heat forging](#) ([B21J 15/027 takes precedence](#); friction heat forging per se [B21J 5/063](#)) }
- Guide heading:** **Accessories**
Auxiliary devices
- B21K 27/00** **Handling devices, e.g. for feeding, aligning, discharging, Cutting-off means**
Arrangement thereof
- B21K 27/02** . Feeding devices for rods, wire, or strips
- B21K 27/04** . . allowing successive working steps
- B21K 27/06** . Cutting-off means
Arrangements thereof
- B21K 29/00** **Arrangements for heating or cooling during processing** ([for preparing metal stock to be forged or pressed B21J 1/06](#); heating equipment per se, see the appropriate classes, e.g. [H05B](#))
- B21K 31/00** **Control devices specially adapted for positioning tool carriers**